Issue Summary

Transmissible Spongiform Encephalopathies
Advisory Committee Meeting
February 8, 2005
Silver Spring, MD

Topic 3: Deferral of Blood and Plasma Donors for History of Transfusion in European Countries

Issue:

In January 2002, FDA recommended deferral of blood and plasma donors who received blood transfusions in the U.K. since 1980 as an additional safeguard against potential transmission of vCJD by blood products. FDA seeks the advice of the Committee whether this deferral now should be expanded to include history of transfusion in other European countries.

Background

At the October 14, 2004 meeting of the TSE Advisory Committee, FDA asked the Committee to consider whether any modifications of protective measures for the US blood supply were indicated. These discussions were prompted by the recent observation of two cases of vCJD in individuals who received transfusions derived from asymptomatic blood donors who later developed vCJD. One of these cases was heterozygous for met/val at codon 129 and neurologically asymptomatic at the time of death, but exhibited prion protein in the lymphoid tissues. This scenario potentially reflects longer-incubation vCJD infection in met/val heterozygous individuals who may have been exposed to the vCJD agent. The committee did not recommend additional donor deferral actions at the October, 2004 meeting. However, there was discussion in two areas: a) the predictive value of the donor travel/residence eligibility questions, and b) the possibility that deferral for transfusion in other European countries outside of the UK may be worthy of additional consideration.

French Health authorities recommended deferral of donors that had previously been transfused in 1998. In December 2004 the Dutch Health Ministry announced that individuals who had received any blood transfusion since 1980 would no longer be eligible as blood donors. This policy resulted in an estimated 8% loss of the Dutch donor base.

Discussion

Few data are available to assess the potential for secondary transmission of vCJD in the US from a donor with prior parenteral exposure to vCJD by transfusion or other means. FDA current donor deferral recommendations are based on a dietary risk (and approximate vCJD case ratio) for France that is 5% of the UK risk and, for the rest of Europe, is 1.5 % of the UK risk. These risks are based upon observed BSE incidence. At the October 2004 TSEAC meeting, FDA presented estimates that additional blood donor loss from deferrals for transfusion in a broader geographic area of BSE endemicity would be 1.4 per 10,000 for prior transfusion in France, and 3 per 10,000 for prior transfusion elsewhere in non-UK Europe. Deferral for any history of transfusion since 1980 among US donors would result in the approximate loss of 5% of the US donated blood supply. Corresponding loss estimates for Source Plasma donors are not available, but (due to age-specific increases in prevalence) are likely to be lower based upon the younger mean age of the donor base.

The negative predictive value of geographically based donor eligibility criteria is also difficult to estimate due to the inherent difficulties in validation. Donor survey research conducted in the early to mid 1990's indicated that false negative donor responses to medical and behavioral questions as assessed by a subsequent anonymous survey tool, may occur in 2-3% of donations. Post-donation information related to geographic exposures continues to comprise a high proportion of biological product deviation reports submitted to FDA, indicating that improvements in current donor eligibility determinations are still needed. A major effort to improve and standardize the donor interview process has been underway by the blood community in collaboration with FDA and other Agencies. This effort includes the cognitive evaluation of all donor questions in an effort to maximize understanding by the broadest segment of donors.

Relevant to any further consideration of a deferral for donors transfused in Europe is the observation that for many years a large proportion of the New York metropolitan area red blood cell supply was imported from US-licensed collection facilities in Germany, Switzerland and the Netherlands. The blood from these facilities (Euroblood) was provided for more than thirty years beginning in the early 1970's and constituted the only licensed blood components imported into the US. The following are some key observations about Euroblood:

?? The Euroblood program began in the early 1970's to address chronic RBC shortages in NY area (due the presence of numerous tertiary care facilities)

- During its peak period, the Euroblood program represented one third of the New York area RBC supply and approximately 2.0 % of the total US RBC supply
- 200 New York Metropolitan-area hospitals were supplied with Euroblood over the 30 year period of importation providing transfusions to an estimated >4 million recipients
- In the absence of a massive lookback effort, Euroblood recipients currently living in the US are largely untraceable.
- The Euroblood program ended in the months prior to 10/31/02, when the FDA recommendations resulted in deferral of whole blood donors for > 5 years travel/residence in Europe.

While a policy to defer any individuals transfused in Europe would result in marginal donor loss, such a policy would not address the US recipients of Euroblood since 1980.

Recent epidemiologic observations about vCJD in France and elsewhere, including current estimates of the potential for transfusion-transmission will be presented during the session to assist the Committee's deliberations.

Questions for the Committee

1. Based upon the available scientific information, does the committee recommend deferral of blood donors transfused since 1980
    a. In France?
    b. In other countries of Europe?

2. Based upon the available scientific information, does the committee recommend deferral of Source Plasma donors transfused since 1980
    c. In France?
    d. In other countries of Europe?